



Treatment Protocol: MEDICAL DEVICE MALFUNCTION

Ref. No. 1206-P

1. Assess airway and initiate basic and/or advanced airway maneuvers prn ([MCG 1302](#))
2. Administer **Oxygen** prn ([MCG 1302](#))
3. Establish type of medical device inserted ❶
4. Establish vascular access prn ([MCG 1375](#))
5. For poor perfusion:
Normal Saline 20mL/kg IV rapid infusion per [MCG 1309](#)
For persistent poor perfusion, treat in conjunction with [TP 1207-P, Shock/Hypotension](#)
6. Assess and document pain ([MCG 1345](#))
7. For pain management: ([MCG 1345](#))
Fentanyl (50mcg/mL) 1mcg/kg slow IV push or IM, dose per [MCG 1309](#) or
Fentanyl (50mcg/mL) 1.5mcg/kg IN, dose per [MCG 1309](#)
Repeat in 5 min prn x1, maximum 2 total doses prior to Base contact
Morphine (4mg/mL) 0.1mg/kg slow IV push, dose per [MCG 1309](#)
Repeat in 5 min prn x1, maximum 2 total doses prior to Base contact

CONTACT BASE for additional pain management after maximum dose administered:
May repeat Fentanyl or Morphine as above maximum 4 total doses
8. For nausea or vomiting in patients ≥ 4 years old:
Ondansetron 4mg ODT
9. Document *Medical Device Malfunction* as the Provider Impression if the patient's presentation suggests malfunction of the medical device, otherwise treat as per applicable protocol.
 - Insulin Pump: Check blood glucose prn and treat in conjunction with [TP 1203-P, Diabetic Emergencies](#)
 - Vagal Nerve Stimulation devices: Treat presenting symptoms; for seizure treat per [TP 1231-P, Seizure – Active](#)
 - Ventricular Assist Device: **CONTACT BASE** and refer to [MCG 1325](#)
 - Ventriculoperitoneal (VP) Shunt: Treat presenting symptoms ❷
 - Pacemaker or Automated Internal Defibrillator: Treat presenting symptoms and obtain 12-lead ECG prn ([MCG 1308](#))



SPECIAL CONSIDERATIONS

- ① Most patients with an inserted medical device have medical complaints that are not related to the device itself and should be treated as per standard protocols based on presenting signs and symptoms. It is important to obtain a history of when the medical device was inserted as different complications occur depending on time since insertion.
- ② Patients with ventriculoperitoneal shunts can have breakage of the shunt connections, obstruction, or infection of the shunt, which may present as ALOC, headache, nausea and vomiting, or fever. History should include last shunt revision date as shunt infections are most likely if a shunt revision is recent.

